

ABSTRACT

This invention is an improved medical device for non-invasive pulsation, including counterpulsation or simultaneous pulsation, treatment of heart disease and circulatory disorder through external cardiac assistance. The device is a cuff which is affixed on a 5 patient's lower body and extremities, and which constricts or expands by electromechanical activation, thereby augmenting blood pressure for treatment purposes. The cuff contains preferably fixed volume fluids such as gel, air, or water. The cuff envelops and is affixed to the patient's lower body and limbs. In an alternative embodiment, the cuff creates a fixed volume of air between the cuff and the patient such 10 that the cuff creates a vacuum when expanding, thereby stimulating return of blood to the constricted region, permitting better and/or faster responses.